

**MEDICAL TREATMENT SYSTEM WITH  
ENERGY DELIVERY DEVICE FOR LIMITING REUSE**

**ABSTRACT**

The present invention provides an energy delivery device for use with a medical  
5 treatment system for the more efficacious treatment of patients during laser surgery which limits  
the number of uses or prevents reuse of the energy delivery device after a certain threshold limit  
has been reached. The energy delivery device comprises a diffusing optical fiber and a memory  
device having data programmed therein and being operatively connected to an energy generator.  
the optical fiber includes a temperature sensor for generating a temperature signal in a closed  
10 loop manner. The data stored in the memory device includes a multiplicity of use parameters,  
usage limits, usage counts, and count limits all relating to the properties of the medical treatment  
system. The use parameters may include an elapsed time, a total treatment time, and a number of  
treatment sites. A main processor is also included for calculating a temperature from the  
temperature signal and for updating the use parameters in response to data received by the main  
15 processor. The main processor is also used to compare the use parameters to their corresponding  
usage limits. The main processor can create and increment a usage count when at least one of  
the use parameters exceeds its corresponding usage limit. Thereafter, the main processor  
compares the usage count to the count limit and disables the energy delivery device when the  
usage count exceeds a predetermined count limit.

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